

Claims

1. A surgical access device for use in laproscopic surgery through an opening comprising:-

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a sleeve of pliable material, the sleeve having an outer sleeve section and an inner sleeve section;

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a chamber for pressurised fluid defined between the inner and outer sleeve sections;

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the inner sleeve section defining a lumen for receiving an object such as a surgeons arm or an instrument therein;

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the sleeve being evertable on engagement of an object in the lumen and axial movement relative thereto so that the inner sleeve section is rolled over outwardly to become an outer sleeve section and the outer sleeve section is correspondingly rolled over inwardly to become an inner sleeve section; and

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at least one eversion limiting means to limit the eversion of the sleeve into an opening.

2. A device as claimed in claim 1 wherein the sleeve is axially turned back on itself to define the outer sleeve section and the inner sleeve section.

3. A device as claimed in claim 1 or 2 wherein the nominal diameter of the outer sleeve section is the same as the diameter of the inner sleeve section.

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4. A device as claimed in any preceding claim wherein the chamber is fluid impermeable.
- 5 5. A device as claimed in any preceding claim wherein the chamber has a port for inflation of the chamber.
6. A device as claimed in any preceding claim including a first eversion limiting means for location externally of the opening and a second eversion limiting means for location internally of the opening.
- 10 7. A device as claimed in any preceding claim wherein the or each eversion limiting mean is an O-ring.
- 15 8. A device as claimed in claim 7 wherein the O-ring is of a resilient material.
9. A device as claimed in any preceding claim wherein the or each eversion limiting means is housed in the chamber.
- 20 10. A device as claimed in claim 9 wherein the or each eversion limiting means is movable axially in the chamber.
11. A device as claimed in claim 10 wherein there are two eversion limiting means and both are independently movable in the chamber.
- 25 12. A device as claimed in claim 10 wherein there are two eversion limiting means and a linkage means is provided between them.
13. A device as claimed in claim 12 wherein the linkage means is of pliable material.
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14. A device as claimed in claim 12 or 13 wherein the linkage means comprises a linkage sleeve.

5 15. A device as claimed in any preceding claim including a sealing means to seal an object to be passed through the access opening.

16. A device as claimed in claim 15 wherein the sealing means comprises a glove to receive a surgeons hand and/or forearm.

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17. A device as claimed in claims 15 or 16 wherein the sealing means is attached to the sleeve.

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18. An access device substantially as hereinbefore described with reference to the accompanying drawings.

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